Web Design Scope and Sequence

The CodeHS Web Design course is a project-based course that teaches students how to build their own web pages. Students will learn the languages HTML and CSS, and will create their own live homepages to serve as portfolios of their creations. By the end of this course, students will be able to explain how web pages are developed and viewed on the Internet, analyze and fix errors in existing websites, and create their very own multipage websites.

The Web Design course is designed for complete beginners with no previous background in computer science. The course is highly visual, dynamic, and interactive making it engaging for students new to computer science. The course has a strong focus on creation. Students will be able to use their own personal interests and creativity to drive their development process.

Module 1: Getting Started - What is The Web	
5 hours (1 weeks)	Students get a high level introduction to the Internet and how it functions, investigate how the Internet has impacted society over time, and set course goals for themselves.
CSTA Standards Addressed 2-NI-04 Model the role of protocols in transmitting data across networks and the Internet. 2-IC-21 Discuss issues of bias and accessibility in the design of existing technologies. 2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution.	

Module 2: HTML - Structuring Websites	
25 hours (5 weeks)	In this unit, students learn about the language behind all websites: HTML. Students learn about several different HTML tags as well as the basic structure of a web page. Students use HTML to develop several of their own creative web pages.
CSTA Standards Addressed	

Module 3: CSS - Styling Websites	
25 hours (5 weeks)	In this unit, students learn the language CSS and use it to style their web pages. Students learn about the benefits of styling with CSS, and will use CSS to create several styled web pages of their own.
CSTA Standards Addressed	

Module 4: Project - Create Your Homepage	
5 hours (1 weeks)	Students will build their own website about themselves. This site will be accessible on their own custom domain, and will be continually improved by the student as they continue on in the course. It will serve as a running portfolio of each creative project they create in the course.
CSTA Standards Addressed 2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution. 3A-AP-16 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. 3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.	

Module 5: Advanced HTML and CSS	
25 hours (5 weeks)	This unit dives deeper into different things we can do with HTML and CSS. Students practice advanced topics in HTML and CSS, including visibility, image filtering, interaction, and animation, to develop more advanced web sites.
CSTA Standards Addressed 3A-AP-16 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.	

Module 6: Project - Tell a Story	
5 hours (1 weeks)	Students will develop an animated and interactive web page that tells a visual story, and add this web page to their personal portfolio website.
CSTA Standards Addressed 2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution. 3A-AP-16 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. 3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.	

Module 7: Bootstrap	
15 hours (3 weeks)	This unit introduces students to Bootstrap, an HTML and CSS framework for developing responsive, professional web sites. Students use Bootstrap to develop several professional, mobile responsive websites.
CSTA Standards Addressed 2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution. 3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.	

Module 8: Bootstrap Project	
5 hours (1 weeks)	In this project, students work in teams to create a professional, responsive website using Bootstrap.

CSTA Standards Addressed
2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution. 3A-AP-16 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions. 3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.

Module 9: Designing User Interfaces	
25 hours (5 weeks)	This unit introduces students to the theory and practice of user interface design. Students learn about what makes an engaging and accessible user interface, and will employ an iterative design process including rapid prototyping and user testing to design and develop their own engaging web pages.
CSTA Standards Addressed	
2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution. 2-IC-21 Discuss issues of bias and accessibility in the design of existing technologies. 2-IC-22 Collaborate with many contributors through strategies such as crowdsourcing or surveys when creating a computational artifact.	

Module 10: Final Project	
10 hours (2 weeks)	In this project, students work in teams to design, prototype, test, and develop a final website
CSTA Standards Addressed	
2-AP-16 Incorporate existing code, media, and libraries into original programs, and give attribution.	

3A-AP-16 Design and iteratively develop computational artifacts for practical intent, personal expression, or to address a societal issue by using events to initiate instructions.

3A-AP-23 Document design decisions using text, graphics, presentations, and/or demonstrations in the development of complex programs.